Teaching Statement

As a social psychologist, I am aware of the important influence that the context and the power-holders in those contexts have on people's engagement and motivation. As an instructor and mentor, I utilize this understanding to craft equitable and inclusive, student-centered learning environments that intentionally facilitate student engagement and growth. I have consistently sought out opportunities for teaching within course contexts, through guest lectures (6) and teaching my own courses (4), and outside of course contexts, through research mentorship (1 masters capstone student, 1 postbaccalaureate fellow, 2 honors thesis students, 10 undergraduate-authored poster presentations). I believe that the most important things students learn from my courses and mentorship are the skills which will serve them in *whatever* role awaits them after my class and after college. I have been actively engaged in refining my pedagogical approaches to ensure that they are aligned with practices that can boost student achievement and motivation, through programs (Graduate Student Teaching Enhancement Program), conferences (Annual Conference on Teaching, STP), faculty evaluations, and student feedback.

Facilitating Student Engagement: Reducing Student Anxiety To Improve Learning
Of the many courses that undergraduates encounter, statistics is one that often conjures up the most anxiety and student concern. Among psychology and social science students, this is often because students think of it as a math course and have labeled themselves as "not math people" or decided they are not good at math. These concerns and emotions are often the biggest barrier to student success in statistics (Ramirez, et al., 2012) and I believe a crucial component of my role as an instructor is assuaging those concerns so that students can do their absolute best.
In Spring of 2021, with COVID-19 raging and courses online, I developed a Harry Potter themed undergraduate statistics course that incorporated gamified elements (Smith, 2017). In the first week of the semester, students were sorted into one of the four houses (Hufflepuff, Gryffindor, Ravenclaw, and Slytherin). Each week, students completed optional activities that gave them additional practice or review of course concepts. Each activity counted as "points" toward a student's house. At the end of the semester, students in each house were awarded extra credit points, added to their course point total, based on their house standing. Individually, students were able to earn Course Tokens for every 3 completed activities, with a 3-token cap for the entire semester. Tokens could be redeemed for assignment extensions or bonus points. My goal with this was to signal to students that 1) this course was not what they expected of a statistics course, 2) we would have some fun in this class, and 3) the course would be less scary than they anticipated. In an introductory assignment, I asked students to report how they were feeling about taking this statistics course. As expected, students overwhelmingly reported anxiety – citing concerns about previous math classes they had taken. However, end of semester student evaluations indicated that the course design reduced their anxiety about statistics and increased their engagement with and understanding of course material. Quantitatively, 85.3% of students strongly agreed or agreed with the statement "The Harry Potter theme of the course was fun and engaging". Many comments reflected sentiments similar to this student: "*First of all, I was very nervous because I do not think I am very good at math, but I actually enjoyed the material. Like I said was nervous for the class but you helped me a lot because of how welcoming you are and how you made the class more fun with the Harry Potter theme.*" In Spring 2022, I combined the gamified elements with a flipped-classroom design (van Alten et al., 2019). As of Spring 2023, I changed the theme to be Percy Jackson/Heroes of Olympus, a series whose entire aim is inclusivity, given the importance of making everyone feel welcome and the mainstream conversations surrounding who has been excluded in the Harry Potter community.

As a research mentor, I emphasize that students and I will work together to ensure that they understand the statistical techniques we employ to examine their research questions. Further, I take time to carefully point out my own and others' difficulty with initial comprehension of many statistical tests. This strategy helps normalize for undergraduate researchers that gaining mastery in statistics is not a matter of innate talent. In turn, students realize that initial challenges in the learning of statistical and research methods is not insurmountable, reducing anxiety and concerns about the research process.

Facilitating Student Growth
A crucial part of the learning experience is making mistakes along the way and effortful persistence to gain new knowledge and understanding of the world around us. This experience can be an uncomfortable and challenging process, but it is one that is necessary in the growth and development of understanding (i.e., growth mindset; e.g., Dweck, 2012; Muenks et al., 2020). I seek to structure my courses in such a way where *everyone* feels supported as they move through the necessary discomfort of the learning process. Thus, I foster inclusive environments that promote student achievement in three key ways: 1) repeated exposure to material, 2) providing multiple opportunities for feedback and learning (Pennebaker et al., 2013), and 3) normalizing and encouraging questions and difficulty with learning.

Across both Social Psychology and Individual Differences (P304) and Undergraduate Statistical Techniques (K300), I build in and center the review of prior material with the integration of new material. In both classes, each class period begins with an interactive review of previous material where I ask students to recall information from the previous class (e.g., clicker questions) resulting in a discussion of both the content (as a review) and the thought process one should employ when approaching these questions (modeling behaviors that will be successful on exams and quizzes). Additionally, I make a point to highlight conceptual connections across the semester. For example, in my Social Psychology class, I used the foundations of history of psychology and research methods (the first week or so of lectures), among others, as threads woven throughout the course. Building from the foundations of history is important because it provides a context for social psychology's beginnings. For example, it is difficult to understand why Milgram conducted his Obedience studies without first acknowledging that WW2 had come before hand and that this study was coming about in a time where behaviorist and personality-based explanations of human behavior were the ruling frameworks. Yet, these foundational studies also give us a great opportunity to revisit research methods, with an eye toward ethics and experimental design, to think critically about what psychologists have done and how we might accomplish similar goals differently. Thus, this approach both provides the scaffolding for students to build connections between older and new material as well as facilitates critical evaluation and contextualization.

Another primary way I facilitate student growth is through providing multiple opportunities for feedback and learning. In both classes, I provide students with low stakes assignments (e.g., quizzes, critical thinking activities) throughout the semester to communicate to students that learning is not a once-and-done process, but a process that takes time, effort, and persistence. In Social Psychology, students had a quiz each week and were allowed to drop 4 of their lowest quiz grades. The majority of students did indeed take all of the quizzes and the grades indicated an upward trajectory with the earlier quizzes having lower grades (an average of 78.2 across those first 5 quizzes) and later quizzes having higher grades (an average of 84 across the final 4 quizzes). These strategies effectively communicate my goals of learning and development. Across both courses, the majority of students reported that I emphasized student learning and development in end of semester course evaluations (*Social*: 65% reported "A lot", *Statistics*: 79.7% reported "A lot"). Student comments support that this was effective as well: "*I didn't expect to learn as much as I did in this class!... I found your lectures so helpful, as well as all of the activities and assignments that accompanied them.*" In research, students and I go through multiple iterations of paper and poster drafts wherein I provide detailed, actionable feedback. In this way, we are able to build understanding of the overall writing process and how the pieces of each project fit together over time.

To further emphasize the importance of feedback in growth and learning, I solicit evaluations and comments from my students at several points across the semester. I intentionally highlight that just as my comments on homework and exams allow them to be more effective learners of the material, their comments on the strengths and weaknesses of the course and my teaching allow me to become a more effective teacher – improving both their experiences within the course and the experiences of students who take the course after them. Again, student comments reflect appreciation for this strategy: "*Tessa was one of few to ask for feedback consistently during the year, which I think many more instructors could stand to implement*." When students provide feedback on things that could be improved, I have a discussion with the class on what improvements were

requested and the steps I am taking as an instructor to improve them to again demonstrate that I value this feedback and how I am using it to grow as an instructor and improve their experiences in my course.

Emphasizing Skills and Application

I ensure that students gain direct experience with critical thinking and identification of real-world applications of material through coursework and mentorship. These are competencies that will be beneficial regardless of the paths that students pursue following college.

Critical thinking skills are crucial as people will be bombarded with new information that needs to be evaluated and presented with new problems that need solutions. Moreover, these two aspects of critical thinking are also core components of the scientific process – reviewing and synthesizing previous research, developing new questions, and determining how best to answer those questions. In my course work, one way that I teach students critical thinking skills through exposure to popular press and academic articles about science. Popular press articles provide an opportunity for students to see how the concepts and skills they are learning can be utilized to evaluate new information. For example, students in my Statistics class were provided with an article from the Los Angeles Times that presented information about a correlational study linking autism and living proximity to highways and asked to read through and evaluate whether the story presented an accurate picture of the research that was discussed. Through this activity, students were thus encouraged to think through the specifics of the research (a correlation that was identified), consider the presentation of the information include the headline (Proximity to freeways increases autism risk), and use their understanding of what correlations can and cannot tell us to evaluate whether the author presented an accurate picture of the research discussed.

Finally, I encourage and emphasize the application of learned concepts to real life. This strategy helps students engage more with and develop a deeper understanding of the material. In Social Psychology, I provided two assignments throughout the course of the semester wherein students were asked to take a social psychological concept and describe how they see this playing out in either some form of media (e.g., TV, movie etc.) or their own lives. Cognitive dissonance, or the state of having inconsistent thoughts, beliefs, attitudes, or behaviors, was one of the constructs with which students struggled the most. For this reason, I devoted an additional lecture to troubleshooting, reviewing, and integrating this concept before we moved on. These efforts paid off as demonstrated in the change in their assessment scores. Prior to this additional review, students' quizzes were on the lower side for this topic (average score 60%; vs. typical quiz average score 80%). After the review, 33/55 students wrote about cognitive dissonance for their application assignment and the average score on this assignment was an 87%. The emphasis on real world applications is also a crucial component of my approach to mentoring undergraduate researchers. In these hands-on research experiences, students have the opportunity apply to real world research questions the skills and concepts they have learned in their psychology courses. As a mentor, I explicitly have discussions with students that help them make the connections between those courses and the techniques we are using in our research.

Summary and Looking Forward

These experiences have been incredibly rewarding. They have allowed my students and me to learn and ask questions together. My course evaluations indicate that they have also been effective for students: Most students rate my overall performance as an instructor as good or very good (*Social*: 91.5% reported "Very Good" or "Good; *Statistics*: 88.7% reported "Very Good" or "Good"). I have received departmental recognition for my teaching, earning the Spring 2020 and 2022 Outstanding Graduate Student Instructor Award. I am deeply passionate about teaching and mentorship, especially undergraduate statistics. I look forward to continuing to refine my teaching techniques and pass on my passion for the world of psychology to the next generation of students, through both course contexts and research mentorship.